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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/960,114	09/21/2001	Kenneth B. Higgins	5113B	5752

7590
Milliken & Company
P.O. Box 1927
Spartanburg, SC 29304

07/31/2007

EXAMINER

JUSKA, CHERYL ANN

ART UNIT	PAPER NUMBER
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1771

MAIL DATE	DELIVERY MODE
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07/31/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

09/960,114

Applicant(s)

HIGGINS ET AL.

Examiner

Cheryl Juska

Art Unit

1771

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 May 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 88, 90, 92-123, 125-128 and 131 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 88, 90, 92-123, 125-128, and 131 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. Applicant's amendment filed May 14, 2007, has been entered. Claims 88 and 120-123 have been amended as requested. Claims 1-87, 89, 91, 124, 129, 130, and 132-149 have been cancelled. Thus, the pending claims are 88, 90, 92-123, 125-128, and 131.
2. Besides the standing prior art rejections, a new prior art rejection is set forth below based upon a new reference, JP 07-275107, issued to Ito et al. Said reference was discovered on an Information Disclosure Statement filed by Milliken on another unrelated, copending application, 10/516,967. Applicant is hereby reminded of the duty to disclose information material to patentability according to 37 CFR 1.56 and MPEP 2000.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
4. Claims 101 and 102 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
5. Said claims are indefinite because it is unclear what the rebond foam layer is laminated to in order to comprise the hot melt laminated or flame laminated carpet tile backings. For the purposes of examination, the claims are treated as merely limiting the rebond foam layer to being laminated by any means to form the carpet tile.

Claim Rejections - 35 USC § 103

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

7. Claims 88, 90, 92-123, 125-128, and 131 stand rejected under 35 USC 103(a) as being unpatentable over US 4,552,857 issued to Higgins in view of US 5,610,207 issued to DeSimone et al. as set forth in section 4 of the last Office Action (Non-Final mailed 12/13/06).

Applicant has amended claim 1 to include an adhesive layer located between the carpet layer and the backing. However, it is argued that said amendment is insufficient to overcome the standing rejection. Specifically, Higgins '857 clearly teaches an adhesive layer 16 located between the primary carpet fabric 12 and the backing 14 (Figure 1 and col. 1, lines 23-65). Therefore, said rejection is maintained.

Response to Arguments

8. Applicant's arguments filed with the amendment have been fully considered but they are not persuasive.

9. Specifically, applicant asserts that DeSimone does not appear to be directed to or disclose a "preformed" rebond foam sheet in combination with an adhesive layer between the carpet layer and the cushion backing (Amendment, 1st paragraph, page 10). First, the present rejection is not based upon DeSimone alone, but rather over Higgins '857 in view of DeSimone. Secondly, as noted in previous Office Actions, the limitation of "preformed" is not given patentable weight at this time since it does not appear to manipulatively effect the structure of the final product.

Thirdly, Higgins '857 clearly teaches an adhesive layer between the primary carpet fabric and the cushion layer. Hence, applicant's argument is found unpersuasive.

10. The rest of applicant's arguments are reiterations from prior responses. Since said arguments have been previously addressed, applicant's attention is directed to sections 7-9 of the Non-Final Rejection mailed 12/13/06, section 4 of the Final Office Action mailed 05/03/06, sections 5-13 of the Non-Final Office Action mailed 10/07/05, and sections 6 and 7 of the Final Office Action mailed 12/09/04. Therefore, applicant's arguments are found unpersuasive and the above rejections stand.

NEW Claim Rejections - 35 USC § 103

11. Claims 88, 90, 92-123, 125-128, and 131 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 07-275107 issued to Ito et al. in view of US 4,522,857 issued to Higgins.

Ito discloses a carpet consisting of a carpet fabric or material 1 (i.e., primary carpet) joined to lining material 2 comprised of polyurethane rebond foam (abstract, Figure, and section [0015] of English translation by machine). The rebond foam layer (i.e., polyurethane elastic material 3) comprises foam urethane chips 4 made from industrial waste or scrap foam and a urethane binder 5 (abstract, section [0006]), and Figure). The rebond foam layer may optionally include filler of waste carpet (section [0007]). Said lining material 2 includes said rebond foam layer 3 bonded to a nonwoven reinforcing fabric (abstract and Figure). In a working example, the carpet is made by forming the rebond foam layer of 110 kg of foam chips of 3-10 mm in size mixed with 15 kg of polyurethane binder, spreading into a sheet, and curing said sheet (section [0014]). The rebond foam sheet is sliced to a desired thickness, such as 8 mm, and then bonded

to a polyester nonwoven fabric having a basis weight of 30 g/m² by heat and pressure to form the lining material 2 (section [0015]). After cooling, said lining material is bonded to a carpet material with heat and pressure to form a carpet (section [0015]). The carpet is suitable for carpet tiles (section [0003] and [0019]).

Thus, Ito discloses the present invention with the exception of (a) the claimed adhesive layer disposed in layered relation between the primary carpet and the rebond foam layer and (b) the recited physical properties (i.e., internal tear strength, appearance retention rating, foam compressibility, hexapod rating, Gmax, air permeability, castor chair rating, EN 1307 rating, and Herzog walking comfort rating). With respect to the former exception, it is well known in the art to produce cushion backed carpet tiles having intermediate adhesive layers, particularly to embed a reinforcement layer between the primary backing fabric and the cushioning layer. For example, Higgins '857 discloses a tufted or bonded carpet tile comprising a primary carpet fabric 12, two adhesive layers 16 sandwiching a stabilizing layer 18, and a foam cushion layer 14 (abstract, Figure 1 and col. 1, lines 26-60). The primary carpet fabric may comprise yarns tufted into a primary backing fabric and adhered thereto by a latex precoat (col. 1, lines 34-38). The adhesive layer is a thermoplastic material, such as a polyolefin or polyamide polymer, and is present in an amount of 10-70 oz/yd² (col. 1, lines 48-55). The stabilizing layer is preferably a fiberglass scrim, but may be a woven or nonwoven fabric of polyester, nylon, or polypropylene (col. 1, lines 26-33 and 52-55). The foam layer may be 2.54-25.4 mm thick with a density of about 10-60 oz/yd² (col. 2, lines 1-6).

Thus, it would have been readily obvious to one of ordinary skill in the art to employ the adhesive layers and stabilizing layer of Higgins '857 as intermediate layers between Ito's

primary carpet fabric 1 and rebond foam cushioning material 2 in order to increase delamination strength and to enhance the dimensional stability of the carpet tile, rather than by laminating the layers through heat and pressure. Additionally, it would have been readily obvious to one skilled in the art to employ the specifics of the adhesive amount and composition and the structures and compositions of the primary carpet fabric and stabilizing fabric in order to produce a successful carpet tile having dimensional stability.

Regarding the latter exception to Ito's teachings, it is argued that the recited properties (e.g., internal tear strength, appearance rating, etc.) would have been obviously present upon modification of the Ito invention with the teachings of Higgins '857. Specifically, the structural and chemical features of the claimed carpet are met by the teachings of the prior art. As such, it is reasonable to presume that said prior art will possess the same physical properties, including those properties presently recited. Like materials cannot have mutually exclusive properties. Therefore, claims 88, 90, 92, 94, 97, 99-104, 106-111, 114-118, 120-123, 125-128, and 131 are rejected as being obvious over the cited prior art.

Regarding claim 98 which limits the density of the rebond foam layer, the cited prior art fails to teach the claimed density. However, it would have been readily obvious to one of ordinary skill in the art to manipulate the foam density in order to obtain the desired cushioning properties. It has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 205 USPQ 215. Therefore, claim 98 is also rejected.

Regarding claims 93 and 113, wherein the layer of rebond foam has at least one lateral surface which is cut, peeled, or slit, said claims are also rejected as being obvious over the cited

prior art. Specifically, Ito teaches slicing laterally the rebond foam layer to form a sheet of a desired thickness (section [0015]).

With respect to the recitation that the rebond foam particles are open-cell foamed polyurethane, the cited prior art fails to explicitly teach that the foam chips are comprised of open-cell foam. However, Ito does teach said foam chips consist of soft, flexible polyurethane foam (abstract and section [0014]). Hence, it would have been readily obvious to select an open-cell foam since said many open-cell foams are known to be soft and flexible. It has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use. *In re Leshin*, 125 USPQ 416. Thus, claims 95, 96, and 105 are also rejected.

Claim 112 limits the carpet tile includes a plurality of layers of rebond foam. While the prior art explicitly fails to teach said plurality of layers, claim 112 would have been readily obvious over the cited prior art. specifically, it would have been obvious to include multiple layers of rebond foam in order to increase the cushioning properties of the carpet tile, while providing added dimensional stability. Hence, claim 112 is also rejected.

With respect to claim 119, the cited prior art fails to explicitly teach the overall height. However, the claimed height would have been readily obvious to one of ordinary skill in the art. In particular, commercially successful carpet tiles have a limited overall height measured in millimeters or inches, rather than feet or yards. As such, it would have been obvious to one skilled in the art to employ the claimed overall height, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233. Therefore, claim 119 is

also rejected.

Conclusion

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cheryl Juska whose telephone number is 571-272-1477. The examiner can normally be reached on Monday-Friday 10am-6pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached at 571-272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

13. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


CHERYL A. JUSKA
PRIMARY EXAMINER

cj
July 19, 2007